

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P236511

Luminaire Tested: **SKB4-LD5-18-N-UNV-L835-CD2-U outer 2 blades vertical inner 2 blades**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P236511
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24061)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SKB4-LD5-18-N-UNV-L835-CD2-U outer 2 blades vertical inner 2 blades
Description: METALUX SKYBAR LED WAVESTREAM LUMINAIRE
4 BLADES WITH NARROW DISTRIBUTION LENS, OUTER 2 BLADES VERTICAL INNER 2
BLADES HORIZONTAL
Light Source: (952) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

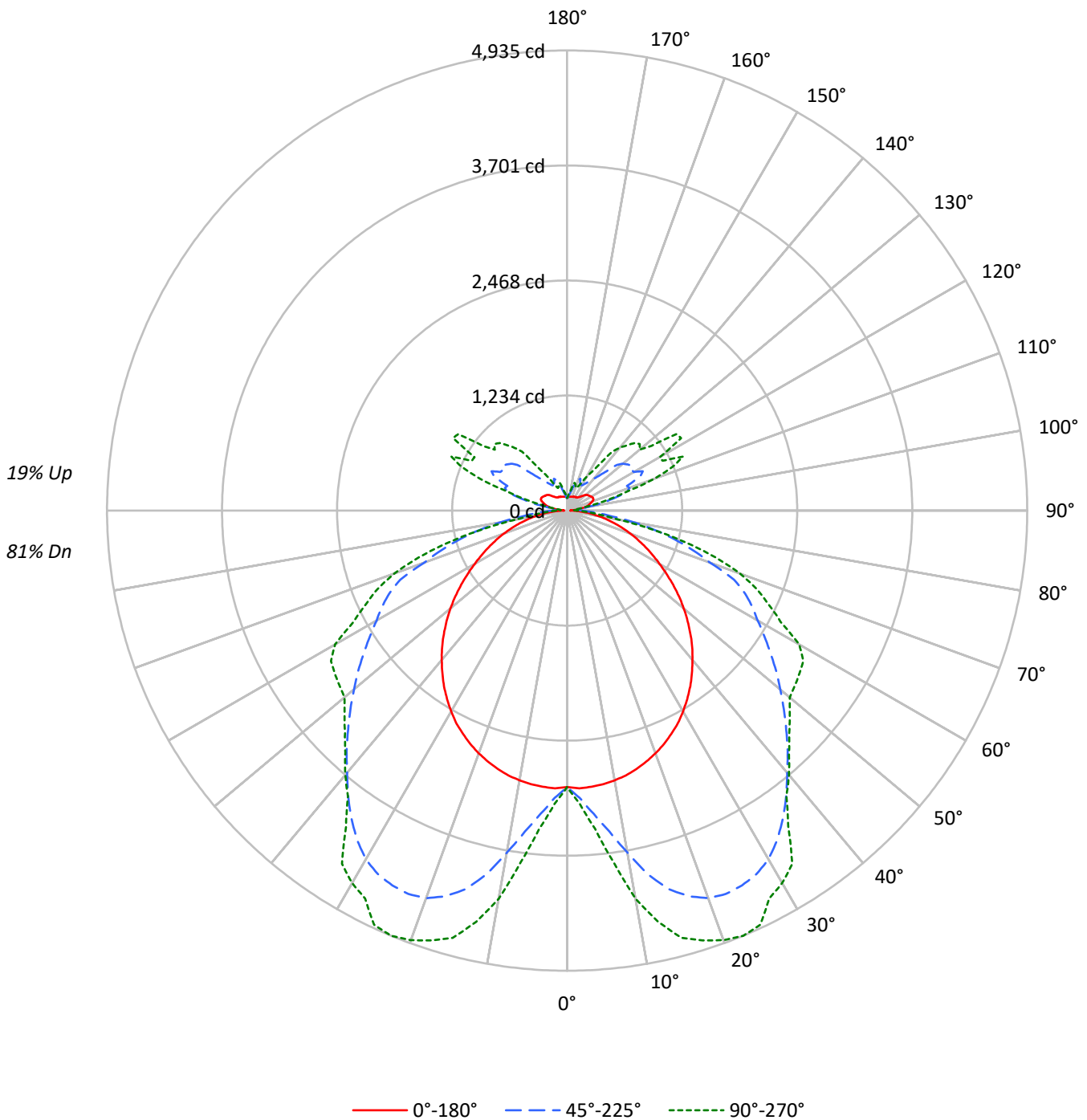
Lumens per Lamp: N/A
Luminaire Lumens: 16811.0 lumens
Efficiency: N/A
Efficacy: 117.2 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.79 / 1.74
Luminous Opening: Rectangular w/ Sides (W: 1.88' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 143.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	115	115	115	115	110	110	110	110	101	101	101	93	93	93	85	85	85	81
1	104	99	95	91	99	95	91	87	87	84	81	80	78	75	74	72	70	67
2	94	86	79	73	90	82	76	70	76	70	66	70	65	62	64	61	58	55
3	85	75	66	60	81	72	64	58	66	60	55	61	56	51	56	52	48	45
4	78	66	57	50	74	63	55	49	58	52	46	54	48	44	50	45	41	38
5	71	58	49	43	68	56	48	42	52	45	40	48	42	37	44	39	35	33
6	66	52	43	37	63	50	42	36	47	40	34	43	37	33	40	35	31	28
7	61	47	38	32	58	46	37	32	42	35	30	39	33	29	36	31	27	25
8	56	43	34	29	54	41	33	28	39	32	27	36	30	25	33	28	24	22
9	53	39	31	25	50	38	30	25	35	29	24	33	27	23	31	26	22	20
10	49	36	28	23	47	35	27	22	33	26	21	30	25	21	28	23	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4256	4256	4256
5°	4264	4656	4886
10°	4242	5320	6043
15°	4204	6056	6845
20°	4154	6484	7195
25°	4085	6664	7377
30°	4000	6709	7182
35°	3890	6540	6722
40°	3755	6270	6343
45°	3608	6046	6156
50°	3433	5856	6143
55°	3228	5713	6569
60°	3013	5646	6917
65°	2830	5731	6544
70°	2646	5203	6330
75°	2437	4624	5158
80°	2199	3637	2885
85°	1860	2409	1861



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	322.2	1.9
10°-20°	1132.5	6.7
20°-30°	1906.3	11.3
30°-40°	2305.6	13.7
40°-50°	2346.3	14.0
50°-60°	2233.7	13.3
60°-70°	1893.0	11.3
70°-80°	1171.7	7.0
80°-90°	385.4	2.3
90°-100°	158.2	0.9
100°-110°	482.9	2.9
110°-120°	784.4	4.7
120°-130°	714.0	4.2
130°-140°	490.6	2.9
140°-150°	259.5	1.5
150°-160°	137.2	0.8
160°-170°	71.4	0.4
170°-180°	16.0	0.1
0°-30°	3361.0	20.0
0°-40°	5666.6	33.7
0°-60°	10246.6	61.0
0°-90°	13696.7	81.5
90°-120°	1425.5	8.5
90°-150°	2889.7	17.2
90°-180°	3114.0	18.5
0°-180°	16811.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2966	2966	2966	2966	2966	
5°	2973	3098	3265	3367	3424	283
15°	2869	3415	4202	4593	4744	809
25°	2642	3606	4435	4823	4900	1217
35°	2301	3316	4034	4174	4135	1438
45°	1870	2741	3323	3437	3370	1442
55°	1386	2110	2659	2962	3042	1240
65°	926	1561	2105	2310	2386	919
75°	525	1028	1193	1312	1316	557
85°	180	445	339	280	257	181
90°	35	248	161	126	109	29
95°	85	181	116	82	68	87
105°	242	428	538	478	465	252
115°	309	515	864	1117	1371	302
125°	282	412	839	1124	1428	253
135°	216	341	597	942	1024	171
145°	172	356	360	493	604	110
155°	162	269	327	318	291	76
165°	154	192	276	323	308	44
175°	147	148	156	157	176	14
180°	136	136	136	136	136	



TEST NUMBER: P236511

CATALOG NUMBER: SKB4-LD5-18-N-UNV-L835-CD2-U outer 2 blades vertical inner 2 blades

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2965.5	2965.5	2965.5	2965.5	2965.5	2965.5	2965.5	2965.5	2965.5	2965.5	2965.5
2.5°	2982.0	2971.8	2968.7	2984.4	3008.8	3020.6	3034.8	3046.6	3063.1	3082.8	3103.2
5°	2973.4	2970.2	2985.2	3025.3	3074.9	3122.1	3171.7	3200.1	3230.7	3264.6	3299.2
7.5°	2960.8	2967.1	3004.1	3073.3	3165.4	3216.6	3274.8	3337.8	3409.4	3470.8	3543.2
10°	2937.2	2959.2	3021.4	3126.1	3214.2	3303.9	3404.7	3503.1	3614.8	3725.0	3832.8
12.5°	2909.6	2942.7	3040.3	3146.5	3271.7	3400.7	3542.4	3691.2	3849.4	3994.2	4129.5
15°	2868.7	2919.9	3042.6	3161.5	3329.9	3500.7	3688.8	3884.0	4066.6	4201.9	4334.9
17.5°	2822.3	2889.2	3023.0	3174.9	3381.1	3594.4	3831.2	4034.3	4204.3	4335.7	4470.3
20°	2771.1	2853.8	2995.4	3182.0	3426.7	3684.1	3928.8	4116.9	4278.3	4423.9	4556.1
22.5°	2710.5	2810.5	2960.8	3178.0	3460.6	3737.6	3970.6	4150.0	4323.9	4449.9	4560.8
25°	2642.1	2756.2	2915.9	3163.1	3476.3	3735.2	3967.4	4158.7	4303.5	4434.9	4551.4
27.5°	2572.0	2686.9	2861.6	3132.4	3454.3	3707.7	3943.0	4108.3	4260.2	4396.3	4523.8
30°	2486.2	2606.6	2790.8	3082.8	3390.5	3643.9	3867.5	4032.7	4183.8	4318.4	4429.4
32.5°	2396.5	2516.9	2706.6	3014.3	3306.3	3558.2	3761.2	3924.1	4065.0	4190.9	4286.9
35°	2301.3	2416.2	2612.1	2924.6	3200.8	3432.2	3640.0	3789.5	3928.1	4034.3	4098.1
37.5°	2198.2	2307.6	2509.8	2814.4	3086.7	3299.2	3497.5	3640.8	3765.1	3858.8	3905.2
40°	2091.9	2193.4	2397.3	2694.0	2949.0	3156.8	3336.2	3481.0	3591.2	3670.7	3710.0
42.5°	1985.7	2073.0	2278.4	2564.9	2795.5	3003.3	3178.0	3313.4	3423.6	3499.9	3544.8
45°	1870.0	1951.8	2156.5	2428.8	2641.3	2841.2	3015.1	3145.0	3246.5	3322.8	3374.8
47.5°	1752.7	1829.1	2029.7	2288.7	2487.0	2682.2	2849.0	2975.8	3078.9	3152.0	3217.4
50°	1633.1	1704.7	1898.3	2129.7	2327.2	2516.9	2679.0	2805.8	2905.7	2983.6	3051.3
52.5°	1511.1	1578.0	1762.2	1978.6	2169.8	2360.3	2510.6	2637.3	2738.9	2825.4	2900.2
55°	1386.0	1452.9	1634.7	1834.6	2020.3	2199.7	2349.3	2472.8	2573.6	2659.4	2745.2
57.5°	1262.4	1329.3	1508.7	1692.9	1878.6	2049.4	2195.8	2309.9	2412.2	2507.5	2601.9
60°	1144.3	1214.4	1386.0	1563.8	1738.5	1903.8	2047.1	2153.3	2252.5	2360.3	2487.8
62.5°	1033.4	1107.3	1267.9	1445.0	1612.6	1766.9	1895.2	1995.9	2104.5	2240.7	2371.3
65°	926.3	1004.2	1156.1	1329.3	1489.8	1632.3	1742.5	1840.9	1971.5	2105.3	2225.7
67.5°	823.2	902.7	1050.7	1216.7	1361.6	1494.6	1587.4	1700.8	1828.3	1936.9	1939.2
70°	720.9	804.3	949.9	1104.2	1237.2	1345.8	1451.3	1552.8	1620.5	1633.1	1690.5
72.5°	621.8	710.7	846.1	988.5	1108.1	1210.4	1308.8	1337.9	1352.1	1417.4	1462.3
75°	524.9	615.5	745.3	872.0	976.7	1079.8	1106.6	1109.7	1149.8	1193.1	1222.3
77.5°	432.1	521.0	644.6	755.5	858.6	902.7	912.2	925.5	942.1	964.9	978.3
80°	344.7	429.7	542.3	644.6	709.1	739.0	744.5	740.6	734.3	728.0	717.8
82.5°	261.3	340.0	439.2	525.7	572.2	591.1	578.5	552.5	529.7	498.2	476.9
85°	180.2	248.7	335.3	400.6	442.3	447.0	424.2	396.7	369.1	339.2	314.8
87.5°	103.9	157.4	231.4	296.7	337.6	335.3	306.9	277.8	254.2	234.5	220.4
90°	34.6	81.9	152.7	212.5	250.3	246.3	221.9	198.3	179.4	161.3	147.2
92.5°	37.0	67.7	119.6	165.3	194.4	197.5	181.0	162.1	143.2	125.1	112.5
95°	85.0	103.1	139.3	170.0	181.8	181.0	168.4	151.1	133.8	116.5	102.3
97.5°	129.1	150.3	180.2	219.6	243.2	238.5	217.2	184.2	162.1	145.6	131.4
100°	174.7	207.0	229.8	273.1	307.7	327.4	318.7	293.6	272.3	245.6	210.9
102.5°	218.0	258.9	280.2	326.6	368.3	399.0	418.7	417.9	403.7	376.2	358.9
105°	242.4	290.4	309.3	363.6	414.0	442.3	469.1	509.2	539.9	538.3	526.5
107.5°	262.9	307.7	331.3	384.9	443.9	506.8	513.1	533.6	619.4	669.8	698.9
110°	290.4	330.6	352.6	402.2	476.9	524.9	603.7	601.3	599.7	711.5	810.6



TEST NUMBER: P236511

CATALOG NUMBER: SKB4-LD5-18-N-UNV-L835-CD2-U outer 2 blades vertical inner 2 blades

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	304.6	341.6	357.3	402.2	486.4	549.3	607.6	705.2	717.8	693.4	750.8
115°	309.3	343.1	362.0	391.9	469.9	560.4	613.9	687.9	813.8	864.2	845.3
117.5°	306.9	337.6	373.8	379.3	441.5	554.1	631.2	679.2	764.2	913.7	1000.3
120°	298.3	322.7	383.3	362.0	417.9	523.4	629.6	704.4	746.9	827.2	972.0
122.5°	289.6	310.1	384.9	350.2	404.5	477.7	611.5	697.3	775.2	813.0	867.3
125°	282.5	299.1	381.7	349.4	380.1	443.1	549.3	680.8	760.3	839.0	879.9
127.5°	273.9	288.1	377.0	372.3	361.2	425.8	495.8	631.2	739.0	813.8	890.9
130°	261.3	274.7	366.8	395.1	343.9	395.1	452.5	539.1	691.8	781.5	853.1
132.5°	239.3	252.6	339.2	398.2	334.5	360.5	428.9	476.2	574.5	727.2	809.1
135°	215.6	229.0	304.6	380.1	344.7	336.8	381.7	439.2	498.2	597.4	740.6
137.5°	199.1	211.7	271.5	358.9	373.8	320.3	351.8	403.0	445.5	505.3	587.9
140°	185.7	198.3	241.6	342.4	382.5	328.2	329.0	362.8	412.4	444.7	494.3
142.5°	176.3	187.3	220.4	314.8	365.2	347.1	314.8	332.9	364.4	409.3	436.8
145°	171.6	179.4	207.8	284.1	341.6	370.7	325.0	310.9	334.5	359.7	400.6
147.5°	171.6	176.3	198.3	249.5	324.3	363.6	345.5	318.0	311.7	332.1	352.6
150°	170.8	173.9	194.4	224.3	296.7	339.2	373.8	328.2	317.2	310.9	325.0
152.5°	166.1	170.0	192.0	215.6	272.3	325.8	355.7	366.0	329.0	321.9	307.7
155°	162.1	165.3	185.7	207.8	240.8	297.5	330.6	357.3	360.5	327.4	326.6
157.5°	159.8	162.1	178.7	198.3	217.2	264.4	306.9	330.6	358.1	369.9	343.9
160°	157.4	159.0	173.1	188.9	207.0	230.6	273.1	306.2	328.2	348.7	369.9
162.5°	155.0	155.8	166.8	181.0	196.0	210.1	234.5	268.4	296.7	318.7	329.0
165°	154.3	154.3	161.3	174.7	185.7	198.3	210.1	227.5	251.8	275.5	294.3
167.5°	151.9	151.9	156.6	166.1	177.1	185.0	195.2	203.8	210.1	225.1	240.0
170°	150.3	150.3	152.7	158.2	166.1	173.9	180.2	185.7	191.2	196.0	198.3
172.5°	148.7	148.0	148.7	151.1	155.0	159.8	166.1	170.0	172.4	175.5	176.3
175°	147.2	146.4	146.4	146.4	147.2	148.0	150.3	151.9	152.7	155.8	157.4
177.5°	145.6	144.8	144.8	144.0	143.2	142.5	141.7	140.9	139.3	138.5	137.7
180°	136.2	136.2	136.2	136.2	136.2	136.2	136.2	136.2	136.2	136.2	136.2



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CATALOG NUMBER: SKB4-LD5-18-N-UNV-L835-CD2-U outer 2 blades vertical inner 2 blades

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2965.5	2965.5	2965.5	2965.5	2965.5	2965.5	2965.5	2965.5
2.5°	3096.2	3111.9	3112.7	3123.7	3154.4	3158.3	3157.6	3150.5
5°	3310.2	3341.7	3355.1	3378.7	3419.6	3428.3	3431.4	3424.4
7.5°	3580.2	3639.2	3676.2	3714.8	3770.6	3799.0	3807.6	3802.1
10°	3906.8	3999.7	4061.1	4120.9	4194.9	4217.7	4235.0	4227.9
12.5°	4201.9	4285.4	4347.5	4419.9	4485.3	4507.3	4519.1	4517.5
15°	4405.8	4494.7	4560.0	4626.9	4696.2	4725.3	4744.2	4744.2
17.5°	4550.6	4641.9	4677.3	4744.2	4792.2	4811.1	4830.8	4833.1
20°	4616.7	4682.0	4736.3	4804.8	4863.0	4881.1	4900.0	4901.6
22.5°	4638.0	4707.2	4772.5	4849.7	4906.3	4921.3	4937.8	4935.4
25°	4631.7	4708.8	4783.6	4861.5	4913.4	4907.9	4918.1	4900.0
27.5°	4601.7	4660.0	4701.7	4724.5	4719.0	4695.4	4693.0	4691.5
30°	4479.8	4508.9	4541.9	4567.1	4585.2	4588.4	4608.0	4612.0
32.5°	4316.8	4348.3	4386.1	4423.1	4449.9	4460.1	4480.5	4493.1
35°	4117.7	4134.3	4165.7	4181.5	4178.3	4149.2	4135.8	4135.0
37.5°	3910.7	3934.3	3955.6	3953.2	3933.6	3890.3	3871.4	3862.7
40°	3733.7	3764.4	3780.9	3778.5	3754.1	3710.0	3700.6	3701.4
42.5°	3566.0	3593.6	3600.7	3585.7	3559.7	3529.0	3526.7	3521.9
45°	3402.3	3433.8	3442.5	3430.7	3410.2	3381.1	3370.8	3370.1
47.5°	3247.3	3281.9	3287.4	3275.6	3267.7	3248.1	3243.3	3237.8
50°	3100.1	3141.0	3144.2	3145.0	3136.3	3119.0	3117.4	3115.8
52.5°	2949.8	2986.0	3008.8	3040.3	3064.7	3066.3	3078.9	3079.6
55°	2801.8	2875.8	2935.6	2989.1	3020.6	3026.9	3040.3	3041.9
57.5°	2695.6	2790.0	2865.6	2923.8	2964.7	2980.5	3000.9	3003.3
60°	2598.0	2702.7	2777.4	2828.6	2853.8	2867.1	2878.9	2873.4
62.5°	2480.7	2566.5	2594.0	2578.3	2575.9	2577.5	2587.7	2581.4
65°	2268.2	2272.1	2284.0	2335.1	2365.8	2373.7	2387.1	2386.3
67.5°	1969.1	2032.9	2083.3	2143.9	2179.3	2188.7	2203.7	2202.1
70°	1743.3	1813.3	1859.7	1917.2	1945.5	1955.0	1970.7	1969.1
72.5°	1511.1	1565.4	1602.4	1645.7	1665.3	1674.8	1671.6	1669.3
75°	1255.3	1286.0	1301.0	1323.0	1324.6	1326.9	1319.8	1315.9
77.5°	979.8	982.2	979.1	982.2	968.8	960.2	946.8	938.1
80°	694.2	667.4	631.2	613.1	593.4	585.5	573.0	569.0
82.5°	457.3	443.1	418.7	404.5	389.6	377.0	367.5	362.8
85°	297.5	290.4	282.5	277.8	271.5	266.0	259.7	256.6
87.5°	210.1	205.4	198.3	194.4	188.9	184.2	177.9	175.5
90°	136.9	133.0	126.7	124.4	120.4	117.3	112.5	109.4
92.5°	104.7	99.2	95.2	92.1	88.1	84.2	80.3	78.7
95°	92.9	88.1	84.2	80.3	77.1	72.4	69.3	67.7
97.5°	123.6	117.3	111.8	109.4	107.0	100.7	98.4	96.8
100°	188.9	183.4	180.2	175.5	170.0	165.3	162.9	162.1
102.5°	351.0	347.9	333.7	323.5	303.8	287.3	281.8	280.2
105°	510.8	487.2	479.3	476.2	471.4	466.7	466.7	465.1
107.5°	712.3	721.7	724.1	719.3	694.2	673.7	664.3	661.1
110°	864.9	915.3	953.9	984.6	988.5	986.9	987.7	989.3



TEST NUMBER: P236511

CATALOG NUMBER: SKB4-LD5-18-N-UNV-L835-CD2-U outer 2 blades vertical inner 2 blades

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	913.0	1027.1	1108.9	1166.4	1195.5	1208.1	1217.5	1221.5
115°	809.9	897.2	1027.9	1206.5	1290.7	1337.9	1362.3	1371.0
117.5°	1024.7	1017.6	983.0	1004.2	1075.1	1121.5	1148.3	1154.6
120°	1105.8	1172.7	1213.6	1222.3	1219.9	1190.0	1156.9	1146.7
122.5°	974.3	1127.8	1244.3	1318.3	1370.2	1408.8	1438.7	1448.1
125°	903.5	974.3	1062.5	1186.1	1291.5	1362.3	1411.1	1428.5
127.5°	946.8	959.4	982.2	1023.1	1071.9	1102.6	1131.7	1141.2
130°	925.5	989.3	1020.0	1027.1	1016.1	1012.9	1014.5	1013.7
132.5°	877.5	933.4	994.0	1036.5	1051.5	1055.4	1057.0	1057.0
135°	813.8	873.6	921.6	962.5	996.4	1009.8	1020.8	1023.9
137.5°	726.4	800.4	852.4	893.3	928.7	942.1	947.6	949.2
140°	561.2	665.8	759.5	813.8	854.7	871.2	877.5	879.1
142.5°	470.6	522.6	577.7	661.1	738.2	776.0	798.8	800.4
145°	427.4	443.1	473.0	513.9	549.3	573.0	594.2	603.7
147.5°	379.3	413.2	426.6	436.8	451.8	466.7	480.1	491.1
150°	341.6	356.5	377.8	403.7	416.3	421.8	428.1	421.1
152.5°	315.6	328.2	342.4	349.4	354.9	356.5	347.9	341.6
155°	310.1	305.4	314.0	321.9	323.5	320.3	298.3	291.2
157.5°	327.4	323.5	315.6	303.8	299.9	276.2	264.4	262.1
160°	366.8	343.1	318.0	313.2	296.7	277.0	271.5	269.2
162.5°	347.1	361.2	365.2	354.9	321.9	306.2	298.3	295.1
165°	312.4	318.0	321.9	324.3	321.1	312.4	309.3	308.5
167.5°	257.4	271.5	278.6	281.8	286.5	281.8	270.0	267.6
170°	201.5	212.5	218.0	222.7	235.3	235.3	225.9	218.8
172.5°	177.1	178.7	181.0	184.2	190.5	193.6	193.6	191.2
175°	156.6	155.8	155.8	158.2	162.9	167.6	171.6	175.5
177.5°	135.4	133.8	131.4	132.2	135.4	140.1	145.6	146.4
180°	136.2	136.2	136.2	136.2	136.2	136.2	136.2	136.2

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